10. *Notes on the Types of Orthoptera described by Dr. L. Péringuey.*— By B. P. Uvarov, Imperial Bureau of Entomology.

(With 11 Text-figures.)

Since the late Dr. L. Péringuey was not a specialist in Orthoptera, it is not surprising that the species of this group published by him * as new were not all described in such a way that they may be easily recognised. It is, therefore, quite necessary to study his types, and this was made possible to me through the kind co-operation of Dr. E. L. Gill, Director of the South African Museum, and Dr. A. J. Hesse, who sent me all Péringuey's types for examination. The present paper embodies the results of my studies on all species by Péringuey, except those belonging to the subfamily *Stenopelmatinae* which will be communicated for examination to Dr. H. Karny who is monographing the group.

Paratypes of several species are now deposited in the British Museum, while the types are returned to the South African Museum.

Family ACRIDIDAE.

Bulla boschimana (Péring.).

1916. *Cystocoelia boschimana*, Péringuey, *loc. cit.*, p. 411.

The structure of the head and pronotum in the type, a female, leave no doubt that the species must be referred to *Bulla*, not to *Cystocoelia*.

Prostalia granulata (St.).

1873. *Pneumora granulata*, Stål, Öfv. Vet. Akad. Förh., 30 (4), p. 53.

1873. *Pompholyx granulata*, Stål, Rec. Orth., i, p. 144.

1916. *Bulla subalata*, Péringuey, Ann. S. Afr. Mus., 15, p. 409, fig. 1. (*Syn. nov.*)

* "Descriptions of New or Little-known Orthoptera in the Collection of the South African Museum," Ann. S. Afr. Mus., xv, 1916, pp. 401–452, 1 pl., 8 figs.

There is in the British Museum a male of *P. granulata*, from Natal, which agrees in all details with the original description of the species, and Péringuey's type of *Bulla subalata*, also from Natal, is undoubtedly another sex of the same species, the structure of head and pronotum being practically identical with that in the male. Péringuey labelled his type "*Bulla semialata*," but in the published description he called the species "*subalata*."

Shortridgea miranda Péring.

Péringuey described this genus and species from several specimens which belong to different species and even genera, but it is clear from his description and the figure that the male from Port St. Johns must be considered as the holotype. Female from the same locality is also the same species, while two more males from Eshowé, Zululand, though undoubtedly congeneric with *miranda*, seem to differ from it specifically; the material at hand, however, does not permit a definite conclusion. One more male, also from Eshowé and another from Umkomaas (not mentioned by Péringuey, but sent to me as a co-type) belong to *Bulla longicornis* St.

In the British Museum there is a damaged female specimen of *Shortridgea miranda*, also from Port St. Johns, Nov. 1923 (R. E. Turner).

The genus *Shortridgea* is readily distinguishable from *Cystocoelia* by the sharp humeral keels of the pronotum. Apart from *miranda* (and the, apparently, distinct species from Zululand mentioned above) to this genus must be referred also *Cystocoelia absidata* Karsch, from East Africa, which also has well-developed humeral keels.

Family TETTIGONIIDAE.

Subfamily DECTICINAE.

Gen. Arytropteris Herm.

1916. *Umtata*, Péringuey, Ann. S. Afr. Mus., xv, p. 444 (*syn. nov.*).

Péringuey could not distinguish *Arytropteris* from *Thoracistus* Pictet, but I have pointed out their differences in another paper (Trans. Ent. Soc. London, 1924, p. 507). He described seven new species, but four of them were based on the female sex only, while in none were the genitalia of either sex mentioned in the descriptions. Only two of these seven species can be referred to *Arytropteris*, while one belongs to my genus *Anarytropteris*, one represents a new genus,

and the remaining three must be included in *Thoracistus*. On the other hand, the genus *Umtata* is a pure synonym of *Arytropteris*, the genotype (*U. musicus*) being even conspecific with one of Péringuey's own species of *Arytropteris* (*A. granulithorax*, see below).

Arytropteris granulithorax Péring.

1916. *Arytropteris granulithorax*, Péringuey, Ann. S. Afr. Museum, xv, p. 441.

1916. *Umtata musicus*, Péringuey, *loc. cit.*, p. 444, pl. xlii, fig. 6 (*syn. nov.*).

I received one male and one female labelled as types of *A. granulithorax*, but the male is clearly immature and without a locality label, and I select here the female as the single type of the species. It is from Port St. John's in the Cape Province, taken by G. C. Shortridge, and so is the single male type on which *Umtata musicus* is based. Apart from the sexual differences in the pronotum, as usual in the genus *Arytropteris*, the male of *U. musicus* differs from the female of *A. granulithorax* only in the absence of the blackish markings, but the general condition of the male type shows that it has been preserved in alcohol (or other liquid) which may have destroyed the markings ; moreover, the degree of development of dark spots alone cannot be considered of specific value in this genus. I do not hesitate, therefore, in establishing the above synonymy.

A. granulithorax is very closely allied to *A. semiaenea* Serv., differing from it mainly in the larger size, pronotum more strongly granulose and more extended and flattened behind. Male genitalia in both species are identical, but the female subgenital plate in *granulithorax* is broader and more broadly triangularly excised behind than in *semiaenea*.

Arytropteris excisa Péring.

Represented by the single female type. Differs from *A. granulithorax* mainly by the pronotum excised behind ; ovipositor is also slightly longer and the subgenital plate more narrow apically, as in *A. semiaenea*.

Anarytropteris irrorata (Péring.).

1916. *Arytropteris irrorata*, Péringuey, *loc. cit.*, p. 441.

The structure of the fastigium in the single female type does not permit retaining this species in *Arytropteris*, while it agrees exactly

with the condition observed in *Anarytropteris*. This latter genus was founded by me for a single species, *fallax* Uv., from Nyasaland, and only the male sex of the genotype is known. A direct comparison of *irrorata* and *fallax* is, therefore, impossible, but Péringuey's species differs from *fallax* already in the striking black pattern, not even slightly indicated in *fallax*. Ovipositor of *irrorata* is relatively not long, stout, almost straight in the basal half and distinctly recurved in the apical half. Subgenital plate is elongate, convex, with a narrow triangular projection behind (fig. 1).

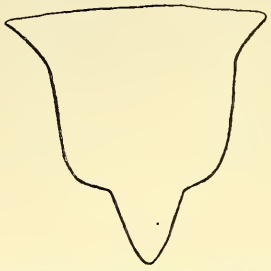

Fig. 1.—*Anarytropteris irrorata* (Pér.). Subgenital plate of the female.

Gen. Thoracistus Pictet.

The genus was founded on *Th. peringueyi* Pict., which has an enormously long and inflated pronotum in the male sex. Another species, *viridifer* Wlk., has been also included by me (Trans. Ent. Soc. London, 1924, p. 508) in this genus, but its pronotum is less strikingly modified. Amongst the three species of Péringuey, which I refer to *Thoracistus*, in two only are the males described, and the pronotum in them, though rounded as it should be in *Thoracistus*, is relatively not long. In the width and shape of the fastigium, however, all Péringuey's species agree with *Thoracistus*. It is not impossible that further studies of the group will make it necessary to restrict the genus *Thoracistus* to the species with inflated pronotum, but it would be premature to do so at the present stage, when our knowledge of the South African Decticinae is of the most fragmentary character.

Two of Péringuey's species are synonymous, so that only three remain, as follows :

Thoracistus modestus (Péring.).

1916. *Arytropteris modesta*, Péringuey, *loc. cit.*, p. 442.

Represented by one male (selected here as the single type) and one female. The genitalia are as follows :

♂ (fig. 2). Last tergite transverse, with a fairly deep and not very broad èmargination ; the lobes triangular. Cerci rather long, conical, unarmed, but with the apex incurved.

♀. Ovipositor moderately long, stout, practically straight basally,

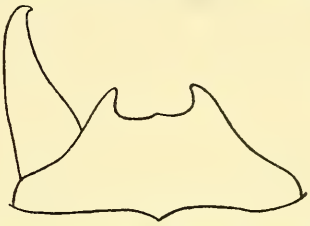

Fig. 2.—*Thoracistus modestus* (Pér.). Male genitalia.

recurved and narrowed apically. Subgenital plate broadly triangular, with a minute apical emargination.

Thoracistus intricatus (Péring.).

1916. *Arytropteris intricata*, Péringuey, *loc. cit.*, p. 443.

1916. *Arytropteris plebeia*, Péringuey, *loc. cit.*, p. 443 (*syn. nov.*).

Both these species were described from females and the author himself could not find any difference between them, except in the number of spinules on the hind femora. This character, however, is subject to strong individual variation in all Decticinae and has no specific value.

Ovipositor in this species is practically straight throughout, but somewhat suddenly recurved near the apex.

Ceresia, gen. nov.

A member of the group *Arytropteres*, differing from other known genera by the front tibiae armed above with only one spine. Fastigium of vertex narrower than the first antennal joint, contiguous with the fastigium of frons. Pronotum of the male long and narrow, but not covering the abdomen; lateral lobes forming scarcely perceptible angles with the convex disc; their margin with a very feeble humeral sinus. Elytra partly visible from underneath the pronotum in the male.

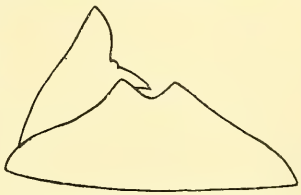

Fig. 3.—*Ceresia pulchripes* (Pér.). Male genitalia.

Genotype: *Arytropteris pulchripes* Péring.

While *A. pulchripes* approaches in its general appearance the two species of *Thoracistus* discussed above, it differs from them in some characters, the armature of the front

tibiae being, in my opinion, especially important and necessitating the description of a new genus.

Male genitalia of *Ceresia pulchripes* are very characteristic, as will be seen from the figure (fig. 3).

Aroegas nigroornatus Péring.

This is a very curious insect and I am not even absolutely certain that it really belongs to Decticinae, the tarsal plantulae being very short and thick, while the tympanal organ of the front tibiae is very widely open. This latter character is present only in one other genus of Decticinae, viz. *Aprosphylus* Pictet (also from South Africa), which in my opinion may also belong not to this subfamily, but, perhaps, to Mecopodinae.

Anterior tibiae of *Aroegas nigroornatus* are entirely unarmed above.

Subfamily CONOCEPHALINAE.

Péringuey described five species belonging to this subfamily and he referred all of them to the genus *Xiphidion* Serv., or *Conocephalus* Thnbg. as it should be correctly called. A study of the types shows, however, that only two of his species belong to *Conocephalus*, while three are members of the genus *Megalotheca* Karny. This latter genus has been established by Karny (Abhandl. zool.-bot. Ges. Wien, iv, 3, 1907, p. 79) for one species from South Africa, and one from Madagascar. Karny included the genus in the subfamily Agroeciinae, but it lacks the essential characters of the latter, while there is nothing against its being referred to Conocephalinae, in the immediate vicinity of *Conocephalus*.

Megalotheca vaginalis Karny.

1907. *Megalotheca vaginalis*, Karny, Abhandl. zool.-bot. Ges. Wien, iv, 3, p. 79.

1916. *Xiphidion restiorum*, Péringuey, *loc. cit.*, p. 447 (*syn. nov.*).

I received three specimens under the name *X. restiorum*. One is a male from Cape Town (J. C. Bridwell), bearing a type label, and I designate it as the single type. Another is a female from Hottentot's Holland (K. H. Barnard) and it agrees exactly with the description and the figure of *Megalotheca vaginalis* Karny; although it was not taken actually together with the male, there is no reason to doubt their being conspecific, and this leads to the above synonymy. Third

specimen is a male labelled French Hoek, Cape Colony, Jan. 1917 (K. Barnard), and it belongs to a new species of *Conocephalus* described below as *C. peringueyi*; as the specimen was collected after the publication of Péringuey's paper, it cannot possibly be one of the typical series.

Megalotheca parvula (Péring.).

1916. *Xiphidion parvulum*, Péringuey, *loc. cit.*, p. 449.

Péringuey's description and the figures of the male genitalia are not accurate, and I think it useful to figure a cercus dissected out (fig. 4). The male subgenital plate is represented by Péringuey as deeply excised, while in fact it is truncate.

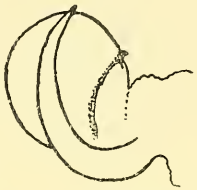

Fig. 4.—*Megalotheca parvula* (Pér.). Left male cercus from inside.

Apart from the two males from Cape Town (type and co-type), I received one male from the Ceres Division, which was identified as *parvula*, but proved to be an entirely different and undescribed species. Its description is as follows:

Megalotheca montana, sp. n.

♂. Slightly larger than *M. parvula* and less slender. Fastigium of vertex strongly compressed, lamellate, acute. Pronotum a little

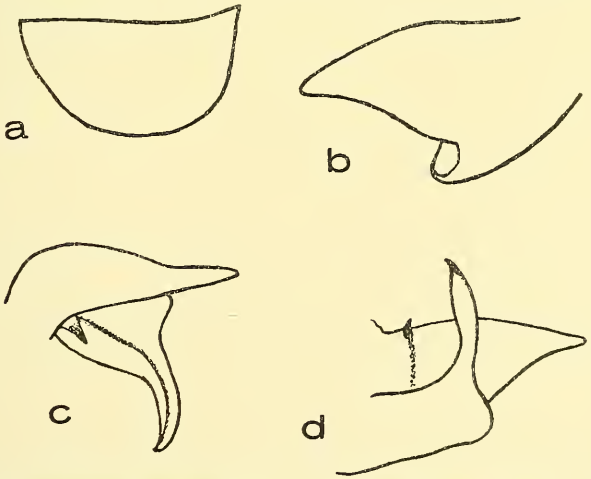

Fig. 5.—*Megalotheca montana*, sp. n., ♂. *a*, lateral pronotal lobe; *b*, *c*, *d*, isolated right cercus viewed from different sides.

longer than the head, very slightly selliform ; front and hind margin truncate ; lateral lobes (fig. 5, *a*) much longer than deep, regularly rounded below. Elytra reaching the middle of the abdomen. Last tergite large, rounded, prominent in the middle behind. Cercus (fig. 5, *b*, *c*, *d*) consisting of a triangular foliaceous part and a curved spine-like inner appendage, the basal part of which is also foliaceous ; there is a small tooth at the base of the triangular part. Subgenital plate truncate.

Coloration dirty-stramineous ; a brownish fascia runs along the head and pronotum ; lower margin of pronotal lobes whitish.

Total length 10 ; pronotum 2·5 ; elytra 3 ; hind femur 7 mm.

Described from a single male, taken at Matroosberg, Ceres Division, 4000 ft., Jan. 1917 (Lightfoot).

Megalotheca longiceps (Péring.).

1916. *Xiphidion longiceps*, Péringuey, *loc. cit.*, p. 450.

This species distinctly differs from the three mentioned above by its larger size and extremely elongated habitus reminding one of the subfamily Saginae. It is not impossible that further studies in this little-known genus will necessitate splitting it up into two genera, but it would be premature to do so now.

I append two figures (fig. 6) taken from the type which may help

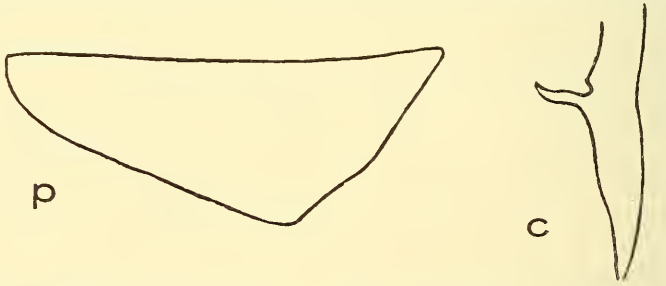

Fig. 6.—*Megalotheca longiceps* (Pér.). *p*, lateral pronotal lobe ; *c*, right cercus.

to identify this species. It seems to be very near to *M. xiphidioides* Karny, from Madagascar, but somewhat larger ; the tooth of the cerci in *M. xiphidioides* is stated to be beyond the middle of the cercus.

Conocephalus (*Xiphidion*) *bechuanensis* Péring.

The type is not a female, as it stands in the original description owing to a misprint, but a male. The cercus is described by

Péringuey very inaccurately; it is fairly long, with a beak-like inner tooth near the obtuse apex, and another similar, but smaller, tooth at

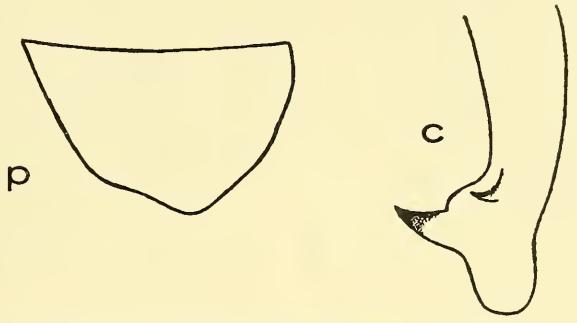

Fig. 7.—*Conocephalus bechuanensis* Pér. *p*, lateral pronotal lobe; *c*, right cercus from above.

the base of the first one (fig. 7, *c*). Subgenital plate is not "deeply arcuate emarginate," the emargination being round and shallow.

Conocephalus (*Xiphidion*) *rhodesianus* Péring.

This is a very slender species, resembling somewhat *Megalotheca longiceps* in its outward appearance, even the cerci being of the same type. The structure of the fastigium, however, shows plainly that it is not a *Megalotheca*, but a *Conocephalus*. The figure of the cercus and of the pronotum may help in recognising the species (fig. 8, *p*, *c*).

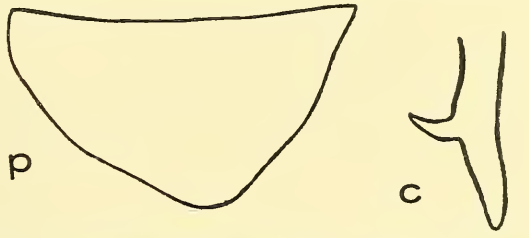

Fig. 8.—*Conocephalus rhodesianus* Pér. *p*, lateral pronotal lobe; *c*, right cercus.

Together with the unique type of this species there was sent to me another male *Conocephalus*, which belongs to a new species as follows:

Conocephalus (*Xiphidion*) *peringueyi*, sp. n.

♂. About the size of *C. bechuanense*, but more slender. Fastigium of vertex strongly compressed (though less so than in *Megalotheca* spp.); seen from the front, its margins are slightly divergent upwards and the apex rounded; seen in profile the fastigium is somewhat ascending anteriorly, with the apex acutely angulate, but the immediate angle is rounded. Pronotum cylindrical, truncate in front, broadly and shallowly emarginate behind; disc with one fine transverse furrow placed well in front of the middle; lateral lobes (fig. 9, *p*) much longer than deep, their lower margin behind the middle roundly excised and strongly ascendent, hind margin straight. Elytra a little shorter than the pronotum. Knee-lobes spined.

Last tergite transverse, hind margin obtusely angulate produced, with the sides somewhat sinuate. Cercus (fig. 9, *c*) consists of a broad conchate basal part, bearing on the concave inner side a chitinous

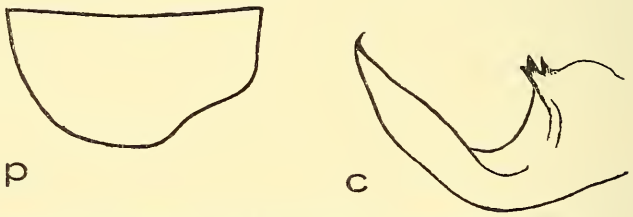

Fig. 9.—*Conocephalus peringueyi*, sp. n. *p*, lateral pronotal lobe; *c*, right cercus.

ridge ending in a double spine, and a spine just below the latter; from the lower hind corner of the basal part arises a long recurved appendage with the apex pointed and curved; the appendage is directed obliquely upwards and inwards.

Stramineous, with a broad castaneous dorsal stripe, and a more narrow and less sharply defined lateral stripe of the same colour along the middle of each pronotal lateral lobe extending also on to the sides of the head.

Total length 12·5; pronotum 3; elytra 3; hind femur 9·5 mm.

Described from a single male from French Hoek, Cape Colony, Jan. 1917 (K. Barnard).

I append here a brief description of one more new species of *Conocephalus* found by me in the British Museum collection in the course of the above studies on Péringuey's types.

Conocephalus (*Thecoxiphidion*) *inaequalis*, sp. n.

♂. Similar to *C. caudalis* Wlk.,* differing from it in the structure of the male genitalia, and in the development of the elytra. The latter are longer than the pronotum, reaching to the middle of the abdomen, with the apex parabolic; they are greenish in front of the radial veins which are green, and brownish behind them, with brown spots along the middle.

Last tergite (fig. 10) produced behind into a paired appendage.

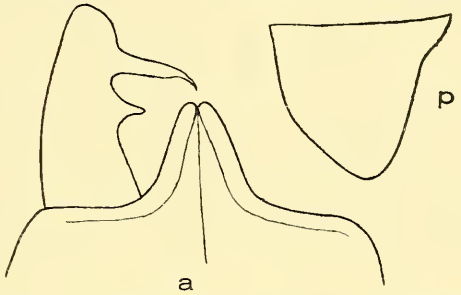

Fig. 10.—*Conocephalus inaequalis*, sp. n. *a*, last tergite and a cercus; *p*, lateral pronotal lobe.

Cercus similar to that in *C. caudalis*, but its inner teeth are very unequal in size, the one nearer the base being much shorter and obtuse.

Total length 12; pronotum 3; elytra 4·5; hind femur 13 mm.

Described from a single male from South Africa (apparently Transvaal, but the exact locality not known). Distant coll.

Subfamily HETRODINAE.

Hetrodes marginatus Wlk.

1869. *Hetrodes marginatus*, Walker, Cat. Derm. Salt. Brit. Mus., ii, p. 226.

1899. *Hetrodes marginatus*, Kirby, Ann. Mag. Nat. Hist., ser. 7, iii, pp. 97, 142.

1916. *Hetrodes knysna*, Péringuey, *loc. cit.*, p. 429 (*syn. nov.*).

* I take the opportunity to publish the following synonymy of this species based on the type:

1869. *Xiphidium caudale*, Walker, Cat. Derm. Salt. Brit. Mus., ii, p. 273.

1891. *Xiphidium natalensis*, Redtenbacher, Verh. z.-bot. Ges. Wien, xli, p. 519 (*syn. nov.*).

Péringuey states that, according to the notes which he took long ago at the British Museum, *H. marginatus=pupus*, but my direct comparison of the types of *marginatus* and *knysna* shows that they are undoubtedly conspecific and well distinct from *pupus*.

Péringuey put the type labels on two specimens of *knysna*, a male and a female from George, Cape Colony, and I select here the male as the single type ; there is another male co-type from the same locality, and still another from Knysna ; it would seem more reasonable to select the latter as the single type, but I feel bound by the author's selection.

Hetrodes namaqua Péring.

Four specimens were sent to me as types, two males and two females, all from O'okiep, Namaqualand, and I select the largest male as the single type. Péringuey mentions also specimen (or specimens) from Uitenhage, Cape Province, but I have not received it.

In the British Museum there is a female of this species from Windhoek, S.W. Africa.

Gen. Acanthoplus St.

Systematists dealing with species of this genus based their taxonomic conclusions entirely on the armature of pronotum, legs, and abdominal segments, but it is sufficient to study even a few specimens of any species to see the unreliability of these characters. Armature of pronotum, consisting of strongly developed spines, is fairly constant, but it does not offer much variety even when different species are compared. At the same time, the number of small spinules on the upperside of tibiae, the underside of femora, as well as the degree of development of spinules on tergites, are subject to considerable individual variation, the armature of femora being often different on the left and the right side of the same specimen.

Péringuey's key to species is based almost entirely on the armature of legs and abdomen and is valueless, while two of his species, based on such characters, must go. Equally unfounded are several species described by Kirby, the types of which are before me.

My own conclusions on the synonymy of species are based primarily on the study of the male cerci, which, though not absolutely constant in shape, present characters much more reliable than the highly unstable armature of legs and abdomen. Since none of the previous authors even mentioned genitalia of their species, while some described them from females and immature specimens, there remain several

species of doubtful standing, as will be seen from the complete list of species, which I think useful to publish here.

Acanthoplus longipes (Charp.).

1845. *Hetrodes longipes*, Charpentier, Orthoptera descr. et depicta, pl. 45.

1916. *Acanthoplus loandae*, Péringuey, *loc. cit.*, p. 433 (*syn. nov.*).

The only difference of *loandae* from *longipes* is in the presence of spinules on tergites, but I find the spinules varying in their development individually. Thus, amongst three males in the British Museum

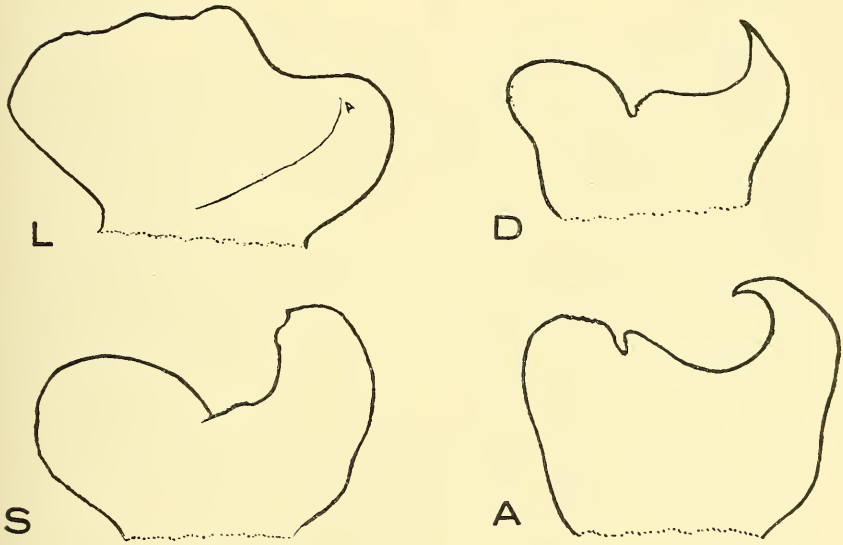

Fig. 11.—Cerci of four species of *Acanthoplus*. L, *A. longipes* (Charp.); D, *A. discoidalis* (Wlk.); S, *A. speiseri* Brancs.; A, *A. armativentris* Pér.

from the Angola Coast (R. Hinamangando, south of Cape St. Martha, F. M. Penney), one has tergites entirely unarmed, another has a median row of spinules, and the third bears one median spine and two lateral ones on the third tergite. Equally variable and often different on the two sides is the number of spinules on the underside of femora; as a rule, however, at least the hind femora bear 1–3 spines on each side underneath.

The male cerci of *A. longipes* (fig. 11, L) are very thick and inflated; their thick apex bears one (sometimes two) very short spinule; the shape of the basal lobe is not very constant.

In its distribution *A. longipes* must be restricted to S.W. Africa, extending from the coast into the Kalahari; it seems to be replaced farther to the east by the next species, but their respective areas of distribution are not yet sufficiently known.

Acanthoplus discoidalis (Wlk.).

1869. *Hetrodes discoidalis*, Walker, Cat. Derm. Salt. Brit. Mus., ii, p. 230.

1869. *Hetrodes pallidus*, Walker, *loc. cit.*, p. 231.

1899. *Acanthoplus desertorum*, Kirby, Ann. Mag. Nat. Hist., ser. 7, iii, p. 142.

1899. *Acanthoplus serratus*, Kirby, *loc. cit.*, p. 143.

1899. *Acanthoplus germanus*, Kirby, *loc. cit.*, p. 143.

1916. *Acanthoplus bechuanus*, Péringuey, *loc. cit.*, p. 433 (*syn. nov.*).

The synonymy of the species described by Walker and Kirby has been correctly established by Péringuey, who, however, distinguished *bechuanus* solely on the armature of tergites, a purely individual character.

This species differs from *A. longipes* by its smaller size, distinctly shorter legs, unarmed underside of femora, and the shape of the male cerci, which are less inflated and bear an acute curved spine at the apex (fig. 11, D); between the spine and the basal lobe there is an obtuse projection which varies somewhat in shape, being either round or conical.

A. discoidalis ranges from Transvaal to Bechuanaland, while Péringuey records it from the S.W. coast as well, which records I am inclined not to accept without verification.

Acanthoplus speiseri Brancs.

1896. *Acanthoplus speiseri*, Brancsik, Jahr. Naturw. Vereines Trencs. Com., xvii–xviii, p. 258, pl. 8, figs. 9*a–d*.

1916. *Acanthoplus varicornis*, Péringuey, *loc. cit.*, p. 435 (*syn. nov.*).

Péringuey's type of *A. varicornis* is a male larva which differs from *speiseri* only in the antennae and tarsi being blackish, which may be either an individual or a juvenile character. Cerci, see fig. 11, S.

Acanthoplus jallae Griff.

Not known to me except from the description.

Acanthoplus armativentris Péring.

Seems to be very close to the preceding species, and may be its synonym. Péringuey separated them (without seeing *A. jallae*) because his species has lateral rows of spinules on the tergites, but this character is variable in the genus. Cerci, see fig. 11, A.

Acanthoplus stratiotes Brancs.

Not known to me and suspiciously near to *A. longipes* and *A. discoidalis.*

Gen. Enyaliopsis Karsch.

Systematics of species of this genus are in an almost hopeless condition. Sjöstedt attempted to clear up some of the confusion by comparing the types of several species, but the key he has drawn up (Arkiv v. Zool., 8, No. 6, 1913, p. 15) does not include all known species, refers only to males, and is based on single type-specimens of each species, the probable individual variation of characters not having been taken into consideration. Péringuey (*loc. cit.*, p. 437) has published a key to six South African species (three of them described by himself), but this did not improve matters, if it did not make them worse. First of all he divided the genus into two groups on the shape of the female ovipositor, in which, in the majority of species, the upper and the lower valvae are divergent, while in two species they are not. After a study of a large material of various species of *Enyaliopsis* in the British Museum, I am able to state definitely that the second type of ovipositor may be observed in any species *in the immature stages.* Péringuey's type of female of *E. patruelis* is undoubtedly a larva in the last stage, and it seems highly probable that the female of *E. durandi* Lucas, in which ovipositor is similarly built, was also immature.

Further separation of species by Péringuey's key depends entirely and solely on the number of tibial spines. This character is, in fact, fairly constant, but, of course, not absolutely reliable, specific difference depending often on a single spine. Moreover, the figures in the key are often in disagreement with those given in the specific descriptions, owing to misprints, or to carelessness of the author.

It is clear that nothing can be done with species of *Enyaliopsis* until a general revision, based on large series of specimens, is undertaken. In the meantime I can only give some notes on the three species described by Péringuey.

Enyaliopsis binduranus Péring.

According to Péringuey's key, this species differs from *petersii* Schaum only by having 4 spines on the outer side of the hind tibiae, the other species having 5 such spines. In the specific description of *binduranus* the number of spines on the hind tibiae is given, however, as 15–16, not 4–17 as in the key (the second figure referring to the inner row of spines); the type, which I examined, has 4 outer and 15–16 inner spines, the latter being irregular in size and differing in number on the two sides of the insect.

I have compared the type of *binduranus* with some specimens in the British Museum which I refer to *E. petersii*, as they agree in every detail with the original description and the figure of the latter. Pronotum of *binduranus* is much more narrow than that of *petersii*, Péringuey's species resembling in that respect *E. ephippiatus* Gerst.; the pronotal spines are all distinctly shorter in *binduranus* than in *petersii*. These characters may be illustrated by the following measurements of pronotum (of the female sex):—

	petersii.	*binduranus.*
Length	18 mm.	16 mm.
Width between hind angles of anterior projection	16 ,,	13 ,,
Width between apices of median spines	15 ,,	10·5 ,,
Width between apices of longest lateral spines	21 ,,	18 ,,
Width between the two spines of hind margin	10 ,,	8 ,,

The ovipositor of *binduranus* has the upper valves more angulately excised than they are in *petersii*, and in this respect it resembles very closely *E. matabelensis* Sjöst. The resemblance between *matabelensis* and *binduranus* in the structure of pronotum is also very close, and the two species seem to differ mainly in their size (*matabelensis* being a smaller insect) and in the number of spines on the middle and hind tibiae.

There are in the British Museum several specimens from Mashonaland, Rhodesia, referable to *binduranus*.

Enyaliopsis transvaalensis Péring.

1916. *Enyaliopsis transvaalensis*, Péringuey, *loc. cit.*, p. 438.

1916. *Enyaliopsis patruelis*, Péringuey, *loc. cit.*, p. 439 (*syn. nov.*).

Péringuey separated *patruelis* mainly on the structure of the ovipositor, which has the valves less recurved than in other species. This is, however, only a larval character, the two female co-types before me being both immature (in the last larval stage). In the structure of pronotum there is no difference between the types of *transvaalensis* and *patruelis*, while the apparently different number of spines on the middle and hind tibiae is due to incorrect count. Indeed, in the co-types of both species, the middle tibiae bear 3–4 spines on one side and 2-4 on the other, while the number of spines on the outside of hind tibiae varies in both from 4–5.

Péringuey's statement that *transvaalensis* is of a darker bronze colour than any of the South African species is due to bad preservation of some of the co-types.

One of the female co-types from Barberton has been marked by Péringuey with the type label, and I confirm here his selection. As regards *patruelis* the selection of the single type is made difficult by the fact that I received four co-types, all bearing specific label in Péringuey's writing. Two of them, a male and female (immature), bear also red type-labels, but the locality label is " Barberton, Rev. Kolbe " for the male, and " Transvaal, Barberton, Randall " for the female. Two other specimens are an immature male with the label " Victoria Falls, Capt. Conolly," and an immature female labelled " Amatongaland, Jan. 89, J. de Coster." Since neither Barberton nor Victoria Falls are mentioned in the original description of *patruelis*, I feel right in ignoring Péringuey's selection of types and select here as the single type of *patruelis* the female from Amatongaland, this being the first locality mentioned in the specific description. Selection of one or another of the co-types as the single type does not affect the above synonymy, since Barberton specimens are obviously conspecific with the others and with the type of *transvaalensis*, also taken at Barberton.